## SPECIFICATION PATENT

Application Date: May 21, 1938 No. (5234/38

Complete Specification Left: May 18, 1939. Complete Specification Accepted: Aug. 31, 1939,

PROVISIONAL SPECIFICATION.

The track of the same of the s

## Improvements relatingsto Window Raising and Lowering Mechanism

We, Wiemor Brenden Limited, and On the slide is mounted another pulley company duly uncorporated under the and the slide is also provided with any laws at Great Britain of Eastern Works, convenient means for effecting connection with and Arenon Save, a. British window.

\*\*Subject of the Company's address, do In combination with the pulleys above mentioned we employ any convenient flexible member such as a cord, leather than the subject to be as follows:

\*\*Subject of the Company's address, do In combination with the pulleys above mentioned we employ any convenient flexible member such as a cord, leather than the subject to be as follows:

\*\*Subject of the Subject to bro-band but preferably a wire on his Whis file.

Asse. a The invention comprises the combina 2015 from of a guide adapted to be mounted wertically work substantially, vertically to beneath or in any other convenient position relatively to the window, a slide although it desired it many be coiled one mounted on the guide and adapted for or more times around this pulley as well—20 connection with the window, a pair of The ends of the flexible member are tion relatively to the window, a slide A SU-councerion with the suids of the guide, suichored to the slide.

It desired an endless wire called or other the opulleys, another pulley on the slide, and a flexible member, such as a wire 25 kable, this member being arranged to pass is movid the pulleys on the guide and slide and being also secured to the slide.

In one insoner, of constructing in saccordance with this inventions agraising 30 and clowering inechanisms for gas motor wellicle window, we employ a guide made from sheet metalsund having its longipretudinal calges bent, over to receive the sedges of a slide which is movable in the ages of a sing which is incombined to be 35 guide. The guide is adapted to be singuished on the door beneath, the window of in any other convenient position telusticly to the window. When applied to the door the guide is arranged in a vertical

40 or substantially vertical position. case is mounted a pulley which is rotatable by simple and convenient form: n-handle, and at or near the lower end of The invention is not limited to vehicle to the cuide as a mounted another pulley. windows, as it may (with appropriate 45 Preferably the latter pulley-iscurried on a modification of detail if necessary) be applied to other windows.

Instead of the lower pulley a fixed arcuntesguids may a Dated this 20th day of May, 1938: included by the term pulley.

thereby declare, the matter than the first the member such as a cord, teather to the strong to be as follows:

I this invention has for its object to pro- bund but preferably a wire cable. This 60 to 10 vide improved window rusing and member passes around all the pulleys. Inventing mechanism, and particularly Preferably it is could exercil times to the first that for motor vehicle around the hand operable pulley to ensure the first and operable pulley. asufficient frictional grip on that pulley and one or more times, around the slide pulley. As regards the other pulley on the slide it is only necessary storogle flexible nember to subject its lower half

> suitable flexible meniber as aforesaid may be used, this being mounted on the pulleys as above described and having one part

for some purposes it may be desirable to employ a chain or a perforated steel to pensishe flexible inember in which case 80 toothed or sproketspulleys would bosised on the guide and slide for making or lowering the window is effected by rotation of the handle on one of the 85 mide and a sullers this metric.

guide pulleys, this rotation liaving the effect of transmitting motion to the slide through the Hexible member,

By means of this juvention we are able the door the guide is arranged in a vertical to provide a mechanism for raising and 40 or substantially vertical position. dowering a window and for holding the serve for near the upper end of the guide, window in any desired position, in a very

[Price 1/-]

## Improvements relating to Window Raising and Lowering Mechanism

Company duly incorporated under the Laws of Great Britain, of Eastern Works. Camden Street, in the City of Birminghain, I und Arthon Smyr, a British Subject, of the Company's address, do hereby doclare the nature of this invention and in what manner the same is to be performed to be particularly described to and accertained in and by the following statoment:-

This invention has for its object to provide improved window raising and lowering mechanism, and particularly mach-to anism of this kind for motor vehicle

windows.

The invention comprises the combination of a guide adapted to be mounted vertically or substantially vertically 20 beneath or in any other convenient posi-tion relatively to the window, a slide mounted on the guide and adapted for connection with the window, a pair of pulleys at or near the ends of the guide, 25 hand operable means for actuating one of

these pulleys, another pulley on the slide, and a flexible member, such as a wire cable, this member being arranged to pass around the pulleys on the guide and slide, 30 and being also secured to the alide.

In the accompanying sheet of explan-

story drawings:

Figures 1 and 2 are respectively a part sectional side elevation and a rear cleva-35 tion of mechanism constructed in accordance with the invention for raising and lowering a motor vehicle window.

Figure 3 is a section on the line 3.3 of

l'agure 2.

In carrying the invention into effect as shown, we employ a guide a made from sheet metal and having its longitudinal edges bent over to receive the edges of a slide b which is movable in the guide. The guide a is adapted to be mounted on

the vehicle door (not shown) beneath the window c or in any other convenient posi-tion relatively to the window. When applied to the door the guide a is arranged 50 in a vertical or substantially vertical position.

At or near the upper end of the guide a is mounted a pulley d which is rotatable by a handle e, and at or near the lower 55 end of the guide is mounted another pulley / Preferably and as shown the pulley / Preferably and as shown the pulley f is carried on a plate g which is slidably adjustable in the guide u under the action of an adjusting screw h. Instead of the lower pulley f a fixed arouste guide may be used, and we desire

We, Wilmon-Breeden Limited, a it to be understood that in this connec-ompany duly incorporated under the tion such a guide is included by the term pulley

The slide b has mounted on it another 65 pulley in, and is provided with any conwith and supporting the weight of the window c. Such means in the example shown, comprises a short stem i on which 70 the pulley m is mounted, and which is secured at one end to the slide 0, the other end of the stem being adapted to extend through a slotted bracket j on a channelshaped member k accommodating the 75 lower edge of the window c.

In combination with the pulleys dm we employ any convenient flexible member n such as a cord, leather band, but preferably a wire cable. This mem- 80 ber n passes around all the pulleys d, f, m. Preferably it is coiled several times around the hand operable pulley d to ensure sufficient frictional grip on that pulley, and one or more times around the slide 85 pulley m. As regards the other pulley f on the guide a it is only necessary for the flexible member n to subtend its lower half, although if desired it may be coiled

well. The ends of the flexible member n are anchored to lugs o on the slide b.

If desired the flexible member may be formed by an endless wire cable or the like, this being mounted on the pulleys as 95 above described and having one part

one or more times around this pulley as 90

anchored to the alide.

For some purposes it may be desirable to employ a perforated steel tape as the flexible member, in which case toothed or 100 sprocket pulleys would be used on the guide and slide.

Movement of the slide b in the guide a for raising or lowering the window o is effected by rotation of the handle s on the 100 guide pulley d this rotation having the effect of transmitting motion to the slidethrough the flexible member n

By means of this invention we are able to provide a mechanism for raising and 110 lowering a window and for holding the

window in any desired position, in a very

simple and convenient form.

The invention is not limited to vehicle. windows, as it may (with appropriate 115 modification of detail if necessary) be applied to other windows.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to 120 be performed; we declare that what we claim is:-

1. Window rusing and lowering mech distributions of a suitable of the such as a wire stable of his manufacture of a substantially vertically, beneath or insuly sourced to the slide. The substantially vertically, beneath or insuly secured to the slide.

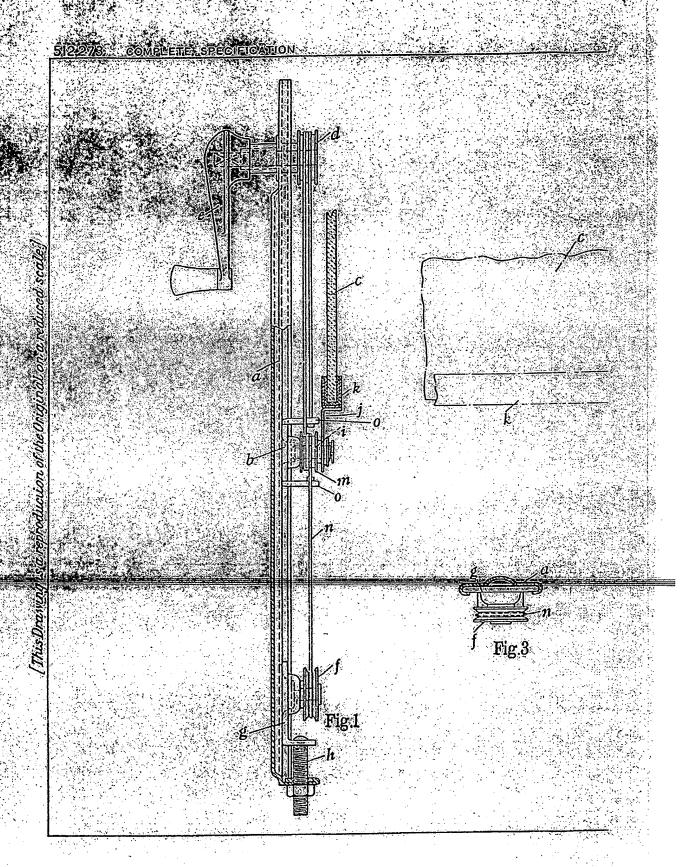
5. other convenient position relatively to the unidow, a slide mounted on the guide and anism as claimed in Claim I and comprising the combination will arrangement of a pair of pulleys at for hear the ends of the guide hand operable means for illustrated in the accompanying drawings. 20 pulley on the slide, and a flexible mon.

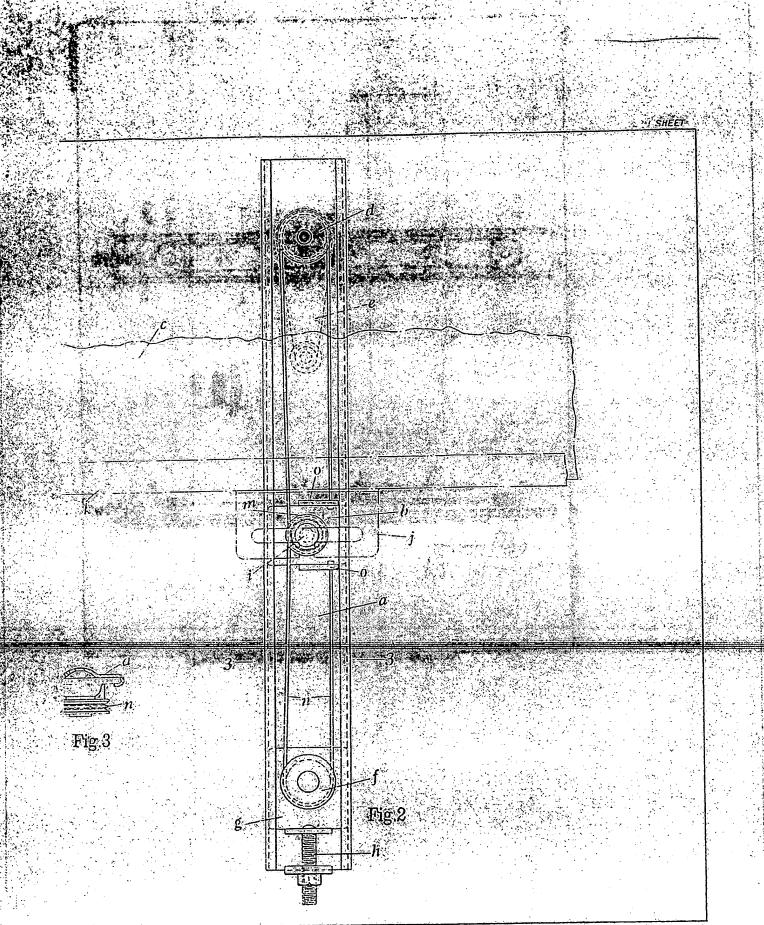
1. Window rusing and lowering mech anism as claimed in Claim I and comprising the combination will arrangement of parts, substantially as described and as the guide hand operable means for illustrated in the accompanying drawings. 20 pulley on the slide, and a flexible mon.

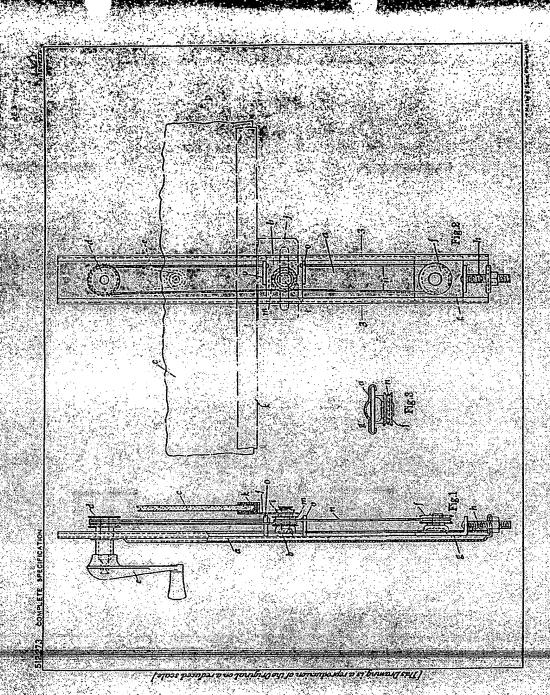
1. Window rusing and lowering mech anism as claimed in Claim I and comprise the combination will arrangement of parts, substantially as described and as illustrated in the accompanying drawings. 20 pulley on the slide, and a flexible mon.

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